REMARKS/ARGUMENTS

The Office Action mailed September 22, 2004 has been carefully reviewed. The claims presented for examination are claims 1–8. Applicants respectfully request reconsideration of this application as amended and in view of the following remarks.

Rejections in the Office Action Mailed September 22, 2004

Claims 1-8 were rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement because, allegedly, the term, "absorptive and scattering" is not disclosed in the specification. Applicants believe the term, "absorptive and scattering" is disclosed in the specification.

Claims 1-2 and 6-8 were rejected under 35 U.S.C. 102(b) as allegedly being anticipated by the Zapata reference (U.S. Patent No. 5,335,237).

Claim 3 was rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over the Zapata reference in view of the Kawamura et al reference (U.S. 5,856,060).

Claim 5 was rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over the Zapata reference in view of the Ragle et al reference (U.S. 4,891,815).

Applicants' Response to the Rejections

Applicants have amended claims 1-8 presented for examination; therefore claims 1-8 are now presented in amended form. Since claims 1-8 now appear in amended form the rejections in the Office Action mailed September 22, 2004 no longer apply.

Applicants have amended the claims to use the term "absorptive or scattering" as it previously appeared. Applicants have also amended the claims to include the term "absorptive and scattering."

The terms "absorptive or scattering" and "absorptive and scattering" are disclosed in Applicants' original specification and shown in Applicants' original drawings. Copies of FIG. 4 and FIG. 5 of Applicants' original drawings are set out below. Portions of Applicants' original specification are quoted to show that

Applicants' claimed invention and particularly the terms "absorptive or scattering" and "absorptive and scattering" are disclosed in Applicants' original specification.

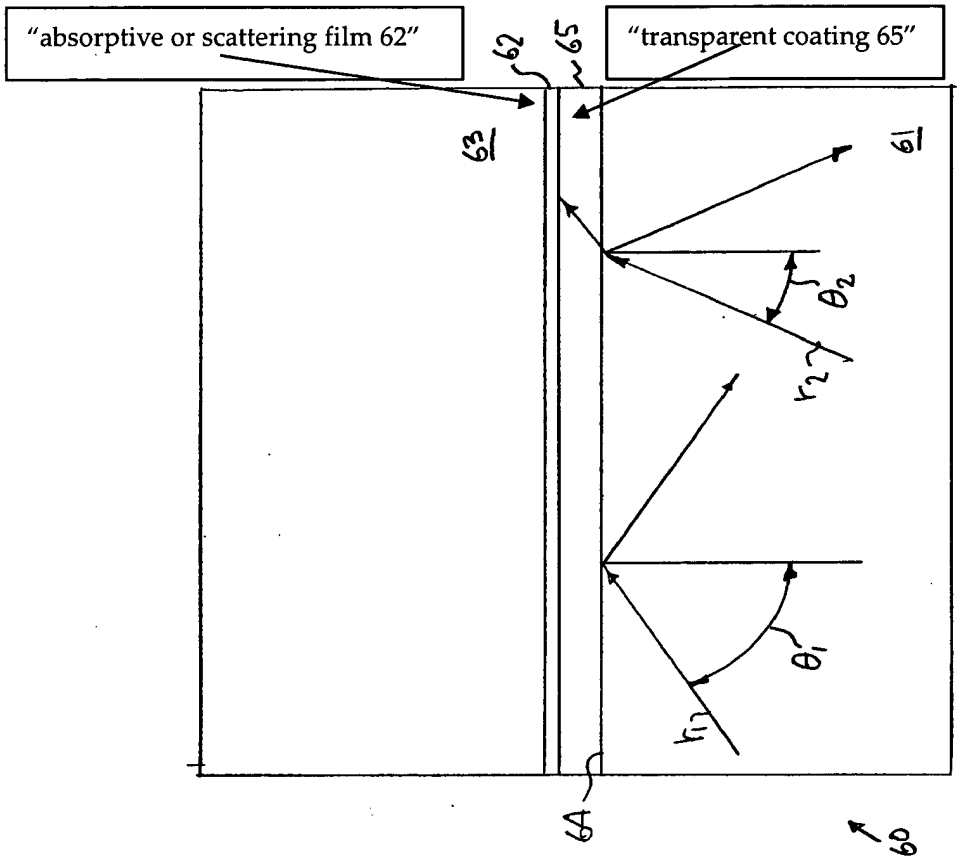

FIG. 4

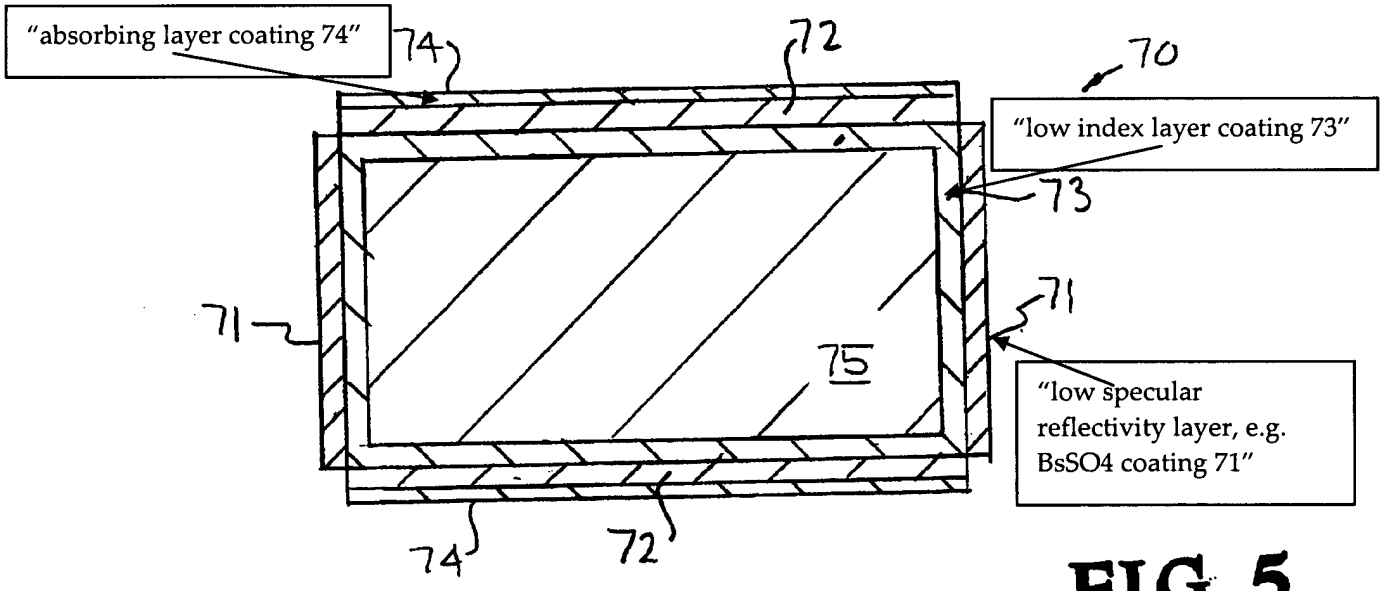

FIG. 5

Applicants' invention as described by amended claim 1 now presented for examination is directed to:

> "A laser that controls amplified spontaneous emission and/or parasitic light, comprising: a laser gain medium having polished surfaces that are used to transport pump light by internal reflection throughout said laser gain medium, a light source directing laser pump light into said laser gain medium, a layered coating on at least some of said polished surfaces that are used to transport pump light by internal reflection of said laser gain medium, said layered coating comprising
>
> a first inner material coating layer, said first inner material coating layer comprising a transparent coating, and
>
> a second absorptive scattering outside material coating layer, said second absorptive scattering outside material coating layer comprising
>
> an absorptive layer or a scattering layer or both an absorptive layer and a scattering layer,
>
> wherein said layered coating is configured to substantially reflect the pump light that strikes the layered coating so as to direct the pump light back into said laser gain medium, and substantially transmit said amplified spontaneous emission and/or parasitic light that strikes the layered coating so as to let this light strike said outside material coating layer of said layered coating where it is scattered or absorbed or both scattered and absorbed."

Referring to FIGS. 4 and 5 above, Applicants' original specification describes the transparent coating as follows:

> "The surface 64 of the gain element 61 (with index n_1) shown in FIG. 4 has a transparent coating 65 of index n_2" (FIG. 4 and Page, 11, Lines 6-7 of Applicants' original application)

> "low index layer of index n2 (n2<n1) coating 73" (FIG. 5 and Page, 11, Line 18 of Applicants' original application).

Referring to FIGS. 4 and 5 above, Applicants' original specification describes the "absorptive layer or a scattering layer or both an absorptive layer and a scattering layer" as follows:

> "the absorbing or scattering film 62 beyond the coating 65" (FIG. 4 and Page, 11, Lines 4-5 of Applicants' original application)

"The coatings shown include low specular reflectivity layer, e.g. BaSO4 coating 71, ... and absorbing layer coating 74." (FIG. 5 and Page, 11, Line 17-19 of Applicants' original application).

Applicants believe amended claims 1-8 comply with the requirements of 35 USC 112, first paragraph. The original application contains (1) an example of an embodiment wherein the outside coating layer is "absorptive or scattering" as illustrated by layer 62 shown in FIG. 4; and (2), an example of an embodiment wherein the outside coating layer is "absorptive and scattering" as illustrated by the layer that includes absorptive coating 74 and reflectivity coating 71 shown in FIG. 5.

Applicant believes the invention claimed in claims 1-2 and 6-8 is not anticipated by the Zapata reference. The standard for a 35 USC §102 rejection is stated in Verdegaal Bros. v. Union Oil Co of California, 814 F.2nd 628, 631 USPQ 1051, 1053 (Fed. Cir. 1987), "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference."

The Zapata Reference Does Not Have Applicants' "Transparent Coating"

Applicants' amended claims 1-2 and 6-8 specify that the inner layer is a "transparent coating." By contrast the inner layer of the Zapata reference is a metal-dielectric absorbing coating M2 as shown by the copy of FIG. 2 from the Zapata reference with the quoted description of M2 from the Zapata reference set out below.

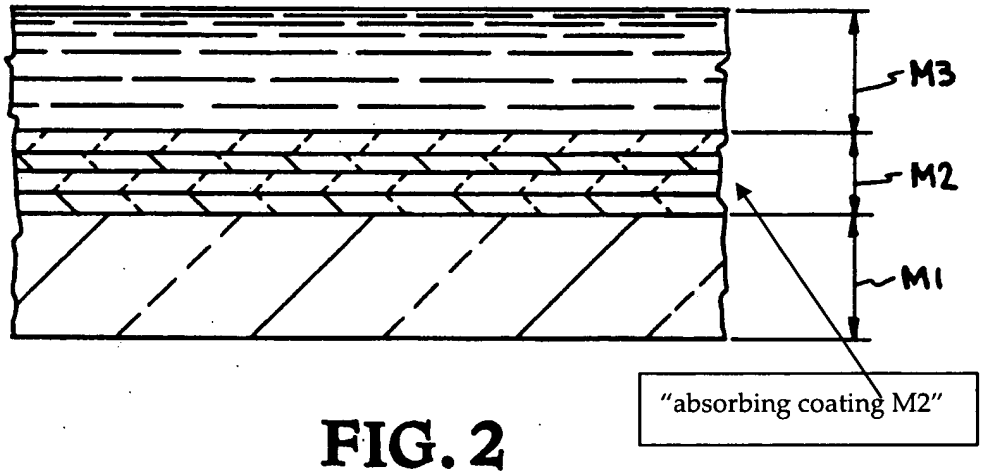

FIG. 2

The Zapata reference describes the metal-dielectric absorbing coating M2 as follows: "Medium 2 (M2) is a multilayer metal-dielectric absorbing coating, e.g., alternating layers of germanium and diamond." (Col. 4, Lines 23-25)

The system shown by the Zapata reference requires the "absorbing coating M2" and would not operate with Applicant's "transparent coating." Further, Applicant's claimed invention would not work with the Zapata absorbing coating in contact with the slab because the absorbing coating would effectively frustrate total internal reflection at the surface.

The Zapata reference does not show an inner "transparent coating" combined with an "absorptive or scattering, or an absorptive and scattering" outside material coating layer as specified in Applicants' claims 1-8. Since an inner "transparent coating" is not found in the Zapata reference, the Zapata reference would not support a 35 USC §102 rejection.

The Zapata and Kawamura et al References

Applicants believe that claim 3 is patentable and that the Zapata and Kawamura et al references would not support a 35 USC §103(a) rejection. The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966) that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) include "Ascertaining the differences between the prior art and the claims at issue."

The differences between the primary Zapata reference and Applicants' invention defined by amended claim 3 includes the fact that Applicants' inner "transparent coating" combined with an "absorptive or scattering, or an absorptive and scattering" outside material coating layer are not found in the primary Zapata reference.

In the Zapata reference, "the Medium M2 is a multilayer metal-dielectric absorbing coating." Applicant's amended claim 3 specifies that the inner layer is a "transparent coating." The system shown by the Zapata reference requires the "absorbing coating M2" and would not operate with Applicant's "transparent coating."

Further, Applicants' claimed invention would not work with the Zapata absorbing coating in contact with the slab because the absorbing coating would effectively frustrate total internal reflection at the surface. The Zapata reference also does not show Applicants' claimed absorptive or scattering, or an absorptive and scattering, outside material coating layer that includes a diffuse reflectance material examples of which include powdered BaSO4, an absorbing film such as Ge, or a roughened surface to reduce the specular reflectivity.

The Kawamura et al reference also fails to show the elements of claim 3 identified above. Since both references fail to show the elements, there can be no combination of the two references that would show Applicants' invention defined by amended claim 3 and render it unpatentable. There is no combination of the Zapata reference and the Kawamura et al reference that would produce the combination of elements of Applicants' amended claim 3. Further, there is no teaching of combining the Zapata reference and the Kawamura et al reference to meet Applicants' amended claim 3. Thus, the combination of references fails to support a rejection of the claims under 35 USC 103, and the rejection should be withdrawn.

The Zapata and Ragle et al References

Applicants believe that claim 5 is patentable and that the Zapata and Ragle et al references would not support a 35 USC §103(a) rejection. The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966) that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) include "Ascertaining the differences between the prior art and the claims at issue."

The differences between the primary Zapata reference and Applicants' invention defined by amended claim 5 includes the fact that elements of amended claim 5 are not found in the primary Zapata reference.

In the Zapata reference, "the Medium M2 is a multilayer metal-dielectric absorbing coating." Applicant's amended claim 5 specifies that the inner layer is a

"transparent coating." The system shown by the Zapata reference requires the "absorbing coating M2" and would not operate with Applicant's, "transparent coating." Further, Applicant's claimed invention would not work with the Zapata absorbing coating in contact with the slab because the absorbing coating would effectively frustrate total internal reflection at the surface. The Zapata reference does not show an "absorptive or scattering, or an absorptive and scattering" layer that includes a roughened surface.

The Ragle et al reference also fails to show the elements of claim 5 identified above. Since both references fail to show the elements, there can be no combination of the two references that would show Applicant's invention defined by amended claim 5 and render it unpatentable. There is no combination of the Zapata reference and the Ragle et al reference that would produce the combination of elements of Applicants' amended claim 5. Further, there is no teaching of combining the Zapata reference and the Ragle et al reference to meet Applicants' amended claim 5. Thus, the combination of references fails to support a rejection of the claims under 35 USC 103, and the rejection should be withdrawn.

SUMMARY

The undersigned respectfully submits that, in view of the amendments and the foregoing remarks, the rejections of the claims raised in the Office Action dated September 22, 2004 have been fully addressed and overcome, and the present application is believed to be in condition for allowance. It is respectfully requested that this application be reconsidered, that the claims be allowed, and that this case be passed to issue. If it is believed that a telephone conversation would expedite the prosecution of the present application, or clarify matters with regard to its allowance, the Examiner is invited to call the undersigned attorney at (925) 424-6897.

Respectfully submitted,

Eddie E. Scott
Attorney for Applicant
Registration No. 25,220
Tel. No. (925) 424-6897

Livermore, California
Dated: November 5, 2004